

REMARKS

Applicants' attorney thanks the Examiner for the careful consideration given to this application.

The invention generally relates to articles having a wholly united layer of UV hardening resin absorbed in an ink pattern to provide a single layer that is decorative and protective. The ink pattern includes ink pattern portions that absorb greater and lesser amounts of hardening resin and respectively provide the decorative layer with portions having a low gloss and a high gloss adjacent to each other. The ink pigments are a factor in the hardening resin absorption.

The matters raised in the action are discussed below in the same order as presented by the Examiner.

The rejections of claims 41 - 46 under 35 USC 112, second paragraph, are overcome for the reasons set forth below.

As to paragraph 4 of the action, the rejection is moot in view of the cancellation of the term "non-solvent" from the claim.

As to paragraph 5 of the action, the objected-to paragraphs have been amended to read as follows.

"said ink pattern including adjacent ink pattern portions, one of which contains ink that absorbs greater amounts of hardening resin and the other of which contains ink that absorbs lesser amounts of hardening resin,
said adjacent ink pattern portions respectively

containing corresponding greater and lesser amounts of absorbed hardening resin,"

The amended paragraphs refer to the adjacent ink pattern portions to clarify that:

a) one of the portions contains ink that absorbs greater amounts of hardening resin and greater amounts of absorbed hardening resin, and

b) the other of the portions contains ink that absorbs lesser amounts of hardening resin and lesser amounts of hardening resin.

The relationship of the ink pattern portions is believed to be clearly expressed by the recitations. However, applicant is willing to consider additional clarifying language proposed by the Examiner.

The recitation of "adjacent decorative layer portions" has been cancelled so as to remove the confusion noted by the Examiner. Claim 41 does recite that the decorative layer comprises a wholly united layer of an ultraviolet ray hardening resin composite absorbed in an ink pattern to provide the united layer as a single layer of the combined ink pattern and hardening resin. This recitation was previously provided in response to the Examiner's request for emphasis of the resulting single, wholly united layer.

As to paragraph 6, claim 46 merely emphasizes that no separate topcoat layer is required since the decorative layer of

claim 41 has the physical and chemical surface protection characteristics of the united ink pattern and hardening resin.

Turning to the rejection of the claims based on the prior art, it is requested that the Examiner reconsider and withdraw the rejection of claims 41 - 44 and 46 under 35 USC 103(a) as unpatentable over JP 2001-315287 to Nobunao et al. As explained below, Nobunao et al. does not teach or suggest a pertinent decorative layer.

The present invention includes the following features set forth in claim 41:

"said ink pattern including adjacent ink pattern portions, one of which contains ink that absorbs greater amounts of hardening resin and the other of which contains ink that absorbs lesser amounts of hardening resin,

said adjacent ink pattern portions respectively containing corresponding greater and lesser amounts of absorbed hardening resin,"

These features are not taught or suggested by Nobunao et al. for the reasons set forth below.

The Examiner argues that "The topcoat resin layer can be comprised of a non-solvent (i.e. aqueous) UV hardening material based upon a human spot translation of these paragraphs (para. 0034 - 0035, 0058)." This is not correct. Specifically, in paragraphs (0033 - 0035) of the Japanese Official Gazette of Nobunao et al., it is disclosed that what may be comprised of a

non-solvent UV hardening resin is the anti-abrasive resin layer 3, not the topcoat resin layer 6. In paragraph 0058, it is disclosed that the topcoat resin layer 6 may be preferably a coating material of high film surface gloss, but there is no disclosure of a specific resin material.

Claim 41 further relates the amount of absorbed hardening resin with the resulting gloss in the following recitations.

"said ink pattern portions containing greater amounts of absorbed hardening resin having a low gloss and said ink pattern portions containing lesser amounts of absorbed hardening resin having a high gloss as compared with said low gloss".

This relationship between the amount of absorbed hardening resin and the gloss of the ink pattern portion is not taught or suggested by Nobunao et al. There is simply no such teaching in Nobunao et al. This is confirmed by reference to Figs. 1 and 2 in Nobunao et al. wherein the only variation is between the ink pattern corresponding with the black colored area indicated by the number 5 and the region having no ink pattern corresponding with the cross-hatched area indicated by the number 6.

It is further apparent from Figs. 1 and 2 that Nobunao et al. do not teach the claimed article having a:

"surface protected by a decorative layer comprising a wholly united layer of an ultraviolet ray hardening resin composite absorbed in an ink pattern, the ink pattern

absorbing the hardening resin to provide said united layer as a single layer of the combined ink pattern and hardening resin, said united layer being applied to said surface by transfer under water pressure and hardened by ultraviolet irradiation,"

Nobunao et al. teach a multilayer construction as shown in Figs. 1 and 2 wherein interior layer 3 is an abrasion resistant wear layer including an inorganic anti-wear agent 4.

The illustrated constructions in Nobunao et al. do not show or suggest the claimed wholly united single layer of hardening resin composite absorbed in an ink pattern and particularly shown as layer 30 in Fig. 3 of the present application. The claimed wholly united single layer is particularly described in paragraph [0078] of the original specification and corresponding paragraph [0069] of the substitute specification with reference to Fig. 2G and Fig. 3.

The use of matting agents in Nobunao et al. is not suggestive of the claimed relationship between the amount of absorbed hardening resin and the gloss of the ink pattern portion. In fact, the Nobunao et al. use of matting agent to control gloss teaches away from the claimed invention and does not suggest that the amount of absorbed hardening resin may be used to achieve a desired relative gloss.

However, the achievement of gloss variation through the claimed decorative layer wherein the ink pattern portions absorb

different amounts of hardening resin does not preclude the use of matting agent as set forth in claim 43. This auxiliary use of matting agent in the present invention is distinguished from the use of matting agent in Nobunao et al.

Claim 45 is patentable for the same reasons as set forth above with respect to claim 41. Wypch is cited as to use of carbon black in inks and does not remedy the deficiencies of the references discussed above. Claim 45 also reflects applicants' discovery that black pigment is particularly effective in absorbing hardening resin and the claim is therefore directed to a preferred pigment species.

Claims 42 - 46 are allowable for the same reasons as indicated above.

For the foregoing reasons, it is submitted that the prior rejections of the claims are in error and/or overcome by amendment. Accordingly, claims 41-46 presently of record are in condition for allowance and such action is requested.

If there are any fees required by this communication, please charge the same to Deposit Account No. 16-0820, Order No. KIK-41079.

Respectfully submitted,

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